

Examining real world quality of care for Australia's First Peoples presenting with chest pain

Trent D. Williams,^{a,b,c,d} Doan T. M. Ngo,^{b,c} and Aaron L. Sverdlow^{a,b,c,*}

^aHunter New England Local Health District, Lookout Rd, New Lambton, NSW 2305, Australia

^bHunter Medical Research Institute, Kookaburra Cct, New Lambton Heights, Newcastle, NSW 2305, Australia

^cCollege of Health Medicine and Wellbeing, University of Newcastle, Callaghan, NSW 2308, Australia

^dNursing and Midwifery Centre, Hunter New England Local Health District, Lookout Rd, New Lambton, NSW 2305, Australia

Australia's First Peoples, Aboriginal and Torres Strait Islanders (Indigenous Australians), continue to face ongoing health, social and economic disadvantage when compared to non-Indigenous people, resulting in adverse health outcomes.¹ This disadvantage is across the spectrum of health conditions and contributes to many chronic cardiovascular, respiratory, metabolic (including diabetes), mental health, and chronic kidney diseases. This disadvantage results in 67% of Indigenous people having at least one serious chronic health condition.² The problem is particularly profound in cardiovascular disease (CVD)—it continues to be one of the leading causes of mortality in Australia, with ischaemic heart disease (IHD) remaining the leading cause of mortality in Australia's First Peoples. Alarmingly young Indigenous people have higher mortality rates from IHD compared to non-Indigenous people.³ Furthermore, mortality rates from CVD for Indigenous Australians are 1.6 times higher than for non-Indigenous Australians. At the same time Indigenous Australians with CVD have lower access to specialised care than non-Indigenous Australians.⁴ This disparity is even higher outside metropolitan areas: the rates of presentation with CVD as the principal diagnosis is 2.3 times higher among as well as 1.6 times higher among people from remote or very remote areas as compared to major cities.⁵ Thus, any examination and insight into this inequality of CVD care is of the utmost importance.

It is established that the further a person lives from metropolitan centre the greater their risk of an adverse outcome from cardiovascular disease.⁶ However, there are limited data regarding readmissions and mortality in rural patients. Data regarding cardiovascular outcomes of Indigenous people have largely been driven by large government agencies and peak bodies. In this context, Dawson et al.⁷ provides meaningful relevant real world data in a timely examination of this issue of critical importance.

Clearly prescribed treatment pathways, guidelines and consensus statements exist within cardiology to guide clinical care, including acute coronary syndrome. Identifying any causes of deviation from accepted benchmarks and pathways remains critical to addressing treatment disparity.⁴ In this issue of the journal, Dawson et al.⁷ describe epidemiology and care quality for Indigenous Australians presenting to hospital via emergency medical services with chest pain in the state of Victoria in Australia. We thank and acknowledge these authors long term commitment to highlighting health inequality. This study is particularly noteworthy for several important findings, with the key one being the demonstration that age-standardized incidence rates for chest pain were 2.73-fold higher overall for Indigenous people (3128 vs. 1147 per 100,000 person-years)—this difference being particularly striking for younger patients, women, and those residing in outer regional areas. Importantly, adherence to care quality and process measures were lower for attendances involving Indigenous people, and alarmingly, these patients were not seen within accepted clinical time benchmarks and were less likely to be transferred to a PCI capable hospital. Unsurprisingly, these data resulted in long-term mortality being observed to be higher among Indigenous Australians following discharge.

This paper is the first to examine prehospital care via ambulance in Victoria at a population-level. As such it provides important data to guide the urgent improvements required to address cardiovascular treatment disparity in Indigenous patients. Whilst the higher mortality data has been described, this paper provides important and much needed data in describing the higher rates of EMS reattendance for chest pain for Indigenous Australians following discharge from hospital. These data represent an ideal opportunity to address primary and secondary prevention strategies, with a focus on culturally appropriate education to address quality of care for Indigenous patients.

Despite the rigorous methodology in this important work⁷ there are some notable limitations: the authors acknowledge that in this retrospective observational cohort study the study setting (Victoria) has a more metropolitan population with lower Indigenous population than other Australian state, limiting broad generalisation. Given the nature of the study and



The Lancet Regional Health - Western Pacific 2023;38: 100869

Published Online xxx
<https://doi.org/10.1016/j.lanwpc.2023.100869>

DOI of original article: <https://doi.org/10.1016/j.lanwpc.2023.100839>

*Corresponding author. School of Medicine and Public Health, College of Health, Medicine and Wellbeing, The University of Newcastle, NSW, Australia.

E-mail address: aaron.sverdlow@newcastle.edu.au (A.L. Sverdlow).

© 2023 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

reliance only on administrative datasets, granular clinical data, such as presence of underlying risk factors, medication prescribing and diagnostic test results were not available. All these may have a meaningful impact on readmission and mortality data⁸ and provide valuable explanations⁹ for some of the differences observed in the study by Dawson et al.⁷ Further research taking these issues and parameters into account would be helpful in defining appropriate management of cardiovascular risk. This is particularly important due to high prevalence of modifiable cardiovascular risk factors observed in Indigenous populations. Any work that focuses on models of care that address this would make an important contribution to closing the gap in life expectancy: currently there is a paucity of data of successful culturally appropriate interventions, however some are showing promise.¹⁰

The overall findings of the study should also give pause for thought about how we are addressing health outcomes for our Indigenous peoples. There is still an approximately 10-year gap in life expectancy in Australia between Indigenous and non-Indigenous members of the community, with cardiovascular disease being the leading cause of this disparity. Currently there is a lack of clinical pathways to guide healthcare workers to help close this gap. Despite the obvious benefits to developing such pathways, barriers to the development and implementation of these pathways are multifaceted and complex. These barriers include, heterogeneity of comorbidity presentation, distrust of current clinical models of care, early onset of chronic disease, as well as geographical limitations to receiving optimal healthcare. Involving indigenous health care workers at every stage of healthcare planning and delivery is essential to achieving improved healthcare outcomes.¹¹

We congratulate the authors for their important contribution to improving cardiovascular outcomes of Indigenous patients.⁷ The study is conducted in one state in Australia, yet it has wide national and international implications as it further supports an urgent need to address gaps and disparities in health care that Indigenous and other ethnic/cultural minority populations experience in many countries worldwide. Whilst we continue to document this, the onus must be on all of us to translate this data into meaningful clinical actions, solutions and change, guided by the input from

and participation of the Indigenous people to improve health outcomes in our communities.

Contributors

Trent D. Williams: Writing—original draft. Doan Ngo: Conceptualization; Writing—review & editing. Aaron Sverdlov: Conceptualization; Supervision; Writing—review & editing. All authors contributed equally.

Declaration of interests

No conflicts of interest declared.

Acknowledgements

Funding: TD Williams is supported by the Hunter New England Health Clinical Services Fellowship (funded by Hunter New England Health; School of Nursing and Midwifery, University of Newcastle, and Nursing and Midwifery Centre, Hunter New England Health). DTM Ngo is supported by the National Heart Foundation of Australia Future Leader Fellowship (award ID 104814), AL Sverdlov is supported by the National Heart Foundation of Australia Future Leader Fellowship (award ID 106025). The funders had no role in study design, data collection, data analysis, interpretation, writing of the Commentary.

References

- 1 AIHW. In: Agency NIA, ed. *Aboriginal and Torres Strait Islander health performance framework - summary report*. Australian Institute of Health and Welfare; 2023.
- 2 AIHW. *Indigenous health and wellbeing*; 2023. Available from: <https://www.aihw.gov.au/reports/australias-health/indigenous-health-and-wellbeing>.
- 3 AIHW. *Australian burden of disease study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018*. Australian burden of disease study. Australian Institute of Health and Welfare; 2022.
- 4 AIHW. *Better cardiac care measures for Aboriginal and Torres Strait Islander people: sixth national report 2021*. Australian Institute of Health and Welfare; 2021.
- 5 AIHW. *Heart, stroke and vascular disease—Australian facts*. Australian Institute of Health and Welfare; 2021.
- 6 AIHW. *Cardiovascular disease, diabetes and chronic kidney disease—Australian facts: Aboriginal and Torres Strait Islander people 2015*. Australian Institute of Health and Welfare; 2015.
- 7 Dawson LP, Nehme E, Burchill LJ, et al. Chest pain epidemiology and care quality for Aboriginal and Torres Strait Islander peoples in Victoria, Australia: a population-based cohort study from 2015 to 2019. *Lancet Reg Health West Pac*. 2023;38:100839. <https://doi.org/10.1016/j.lanwpc.2023.100839>.
- 8 McGee M, Sugito S, Al-Omary MS, et al. Heart failure outcomes in Aboriginal and Torres Strait Islander peoples in the Hunter New England region of New South Wales. *Int J Cardiol*. 2021;334:65–71.
- 9 McGrady M, Krum H, Carrington MJ, et al. Heart failure, ventricular dysfunction and risk factor prevalence in Australian Aboriginal peoples: the heart of the heart study. *Heart*. 2012;98(21):1562–1567.
- 10 NHF. *Lighthouse Hospital project, Phase 3, Summary of evaluation findings*. National Heart Foundation of Australia; 2021.
- 11 McGee M, Shephard L, Sugito S, et al. Mind the gap, Aboriginal and Torres Strait Islander cardiovascular health: a narrative review. *Heart Lung Circ*. 2023;32(2):136–142.